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10/542,723	07/20/2005	Michael Menth	2003P00697WOUS	8414

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SIEMENS CORPORATION
INTELLECTUAL PROPERTY DEPARTMENT
170 WOOD AVENUE SOUTH
ISELIN, NJ 08830

EXAMINER	
CHAN, SAI MING	
ART UNIT	**PAPER NUMBER**
2416	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/542,723	MENTH ET AL.	
	Examiner	Art Unit	
	Sai-Ming Chan	2416	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *9/3/2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *11-30* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *11-30* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 11-19, 21, 24-30 are rejected under 35 U.S.C. 102(b) as being anticipated by **Ben-Ami (U.S. Patent Publication #20020027885)**.

Consider **claim 11**, Ben-Ami clearly discloses and shows a method for setting limit values of an access control for limiting traffic transmission in a communication network (paragraph 0153 (dynamically controlling available capacity)), wherein the communication network comprises a plurality of pairs of marginal nodes between which the transmission occurs (fig. 2, paragraph 0012 (plurality of edges)), and the limit values of the access control are limit values regarding the pairs (fig. 5 (1 and 3 (adjacent nodes and link capacity)), paragraph 0012 (plurality of edges with corresponding capacity values)), the method comprising the following steps:

setting the limit values (fig. 5 (3), paragraph 0012 (plurality of edges with

corresponding capacity values)) such that probabilities (paragraph 0005 (blocking factor =0)) for each of the pairs related to not approving the transmission between the marginal nodes of the pair are substantially the same (paragraph 0005 (blocking factor =0)), and such that an overload situation in the communication network does not occur (fig. 5 (link capacity), paragraph 0076);

increasing the limit values to a minimum value at which an overload situation starts to occur (paragraph 0151 (some traffic unsatisfied)), such that the probabilities are substantially the same (fig. 6 (non-blocking), paragraph 0005 (blocking factor =0)); and

updating the limit value regarding at least one of the pairs of marginal nodes, between which a transmission occurs causing the overload situation, by setting the limit value to the minimum value (paragraph 0159 (capacities of the edges sum up to no more than the capacity of the switch)).

Consider **claim 26**, Ben-Ami clearly discloses and shows a method for setting limit values of an access control for limiting traffic transmission in a packet-switched communication network comprising a plurality of marginal nodes and a plurality of internal nodes, the method comprising:

identifying all pairs of marginal nodes in the network (fig. 2 (A-D (to/from input ports), paragraph 0025), wherein each pair of marginal nodes is identified as an origination and destination node of a given transmission in a given direction within the network, and not an intermediate internal node in the given transmission (fig. 2 (A-D

(to/from input ports), paragraph 0025);

using a traffic model to set a traffic threshold value for each pair of marginal nodes so that blocking probabilities are substantially the same for each pair of marginal nodes (fig. 6 (non-blocking), paragraph 0005 (blocking factor =0));

operating the network with communications traffic (paragraph 0001);

increasing the threshold values of all pairs of marginal nodes step-by-step until congestion occurs on at least one pair of marginal nodes (paragraph 0012 (increasing capacity of plurality of communication edges), paragraph 0374 (monitor for utilization beyond threshold));

reducing the threshold value on the at least one pair of marginal nodes to the threshold value at the step before the congestion occurred (paragraph 0159 (capacities of the edges sum up to no more than the capacity of the switch)); and

repeating from the increasing step on the remaining pairs of marginal nodes until each of the pairs of marginal nodes has reached a respective congestion and then its threshold value has been reduced to the step before the respective congestion occurred (paragraph 0159 (capacities of the edges sum up to no more than the capacity of the switch));

whereby traffic throughput of all marginal pairs of the network is optimized (paragraph 0159 (capacities of the edges sum up to no more than the capacity of the switch)).

Consider **claim 28**, Ben-Ami clearly discloses and shows a method for setting limit values of an access control for limiting traffic transmission in a packet-switched communication network comprising a plurality of marginal nodes and a plurality of internal nodes, the method comprising:

identifying all pairs of marginal nodes in the network (fig. 2 (A-D (to/from input ports), paragraph 0025), wherein a pair of marginal nodes is defined as a starting and ending point of a given transmission in a given direction in the network, including an ingress node mad an egress node, or an ingress node and an addressee node of the given transmission, or a transmitter node of the given transmission and an egress node, regardless of a path of the given transmission between the pair of marginal nodes (fig. 2 (A-D (to/from input ports), paragraph 0025);

estimating a traffic blocking probability for each pair of marginal nodes using a traffic model (fig. 6 (non-blocking), paragraph 0005 (blocking factor =0));

setting a traffic limit value for each pair of marginal nodes (fig. 5 (3), paragraph 0012 (plurality of edges with corresponding capacity values)) based on the traffic model so that no overload situation occurs in the network, and wherein the blocking probability for each of the pairs of marginal nodes is substantially the same (fig. 6 (non-blocking), paragraph 0005 (blocking factor =0));

operating the network with communications traffic (paragraph 0001);

raising the limit values on all of the marginal nodes, step by step, until a first overload occurs on one or more pairs of overloaded marginal nodes (paragraph 0159 (capacities of the edges sum up to no more than the capacity of the switch)); and

reducing the limit value on each of the overloaded marginal nodes to the limit value at the step prior to the first overload, and not reducing the limit value on the remaining non- overloaded pairs of marginal nodes (paragraph 0159 (capacities of the edges sum up to no more than the capacity of the switch)).

Consider **claim 12**, and **as applied to claim 11 above**, Ben-Ami clearly discloses and shows a method, wherein the probabilities related to not approving the transmission between the marginal nodes of the pairs are blocking probabilities related to blocking the transmission between the marginal nodes of the pairs (fig. 6 (non-blocking), paragraph 0005 (blocking factor =0)).

Consider **claim 13**, and **as applied to claim 11 above**, Ben-Ami clearly discloses and shows a method, wherein the marginal nodes include nodes of the network representing sources or sinks of traffic of the network (fig. 2 (A-D (to/from input ports), paragraph 0025).

Consider **claim 14**, and **as applied to claim 11 above**, Ben-Ami clearly discloses and shows a method, wherein the marginal nodes are specified by ingress nodes and egress nodes of the network (fig. 2 (A-D (to/from input ports), paragraph 0025).

Consider **claim 15**, and **as applied to claim 14 above**, Ben-Ami clearly discloses and shows a method wherein the plurality of the pairs comprises all pairs of the network

consisting of an ingress node and an egress node in each case (fig. 2 (A-D (to/from input ports), paragraph 0025).

Consider **claim 16,** and **as applied to claim 11 above**, Ben-Ami clearly discloses and shows a method wherein the overload situation is produced when in a scenario of high traffic load, in which the limit values for the access controls are still adhered to (paragraph 0159 (capacities of the edges sum up to no more than the capacity of the switch)), a threshold value is exceeded on a link for the traffic transmitted over the link (paragraph 0177 (non-uniform distribution of traffic/utilize switch to its fullest capacity), paragraph 0374 (congested or utilized beyond predetermined threshold)).

Consider **claim 17**, and **as applied to claim 16 above**,

claim 21, and **as applied to claim 20 above**,

Ben-Ami clearly discloses and shows a method, wherein the threshold value for the traffic transmitted over the link is assigned to the link such that in case of failure of the link, the traffic allowed within the framework of the access controls does not represent any overload (paragraph 0374 (congested or utilized beyond predetermined threshold)).

Consider **claim 18**, and **as applied to claim 11 above**, Ben-Ami clearly discloses and shows a method further comprising increasing the limit values regarding further pairs of the pairs, which for the limit value is not determined yet, in excess of the minimum value to a further minimum value at which a further overload situation starts to

occur (paragraph 0012 (increasing capacity of plurality of communication edges), paragraph 0374 (monitor for utilization beyond threshold)); and

updating the limit value regarding at least one of the further pairs of marginal nodes, between which a transmission occurs causing the further overload situation, by setting the limit value to the further minimum value (paragraph 0012 (increasing capacity of plurality of communication edges), paragraph 0374 (monitor for utilization beyond threshold)).

Consider **claim 19**, and **as applied to claim 18 above**, Ben-Ami clearly discloses and shows a method , comprising repeating the further steps until the limit values for all of the pairs are determined (paragraph 0012 (increasing capacity of plurality of communication edges), paragraph 0374 (monitor for utilization beyond threshold)).

Consider **claim 24**, and **as applied to claim 11 above**, Ben-Ami clearly disclose and show a network node with means for executing the method (paragraph 0183 (software means)).

Consider **claim 25**, and **as applied to claim 24 above**, Ben-Ami clearly discloses and shows a network node wherein the network node is a marginal node of the network (fig. 2 (A-D), paragraph 0012 (plurality of edges)).

Consider **claim 27**, and **as applied to claim 26 above**, Ben-Ami clearly discloses and shows a method, wherein each pair of marginal nodes is defined as an ingress node and an egress node, or an ingress node into the network and an addressee node of the given transmission within the network, or a transmitter node of the given transmission within the network and an egress node from the network, regardless of traffic path and internal nodes for routing the given transmission between the pair of marginal nodes (fig. 2 (A-D (to/from input ports), paragraph 0025).

Consider **claim 29**, and **as applied to claim 28 above**, Ben-Ami clearly discloses and shows a method, further comprising:

raising the limit values of all of the remaining non-overloaded nodes, step by step, until a next overload occurs on one or more next pairs of overloaded marginal nodes (paragraph 0012 (increasing capacity of plurality of communication edges), paragraph 0374 (monitor for utilization beyond threshold)); and

reducing the limit value on each of the next overloaded marginal nodes to the limit value at the step prior to the next overload (paragraph 0159 (capacities of the edges sum up to no more than the capacity of the switch)), and not reducing the limit value on the remaining non- overloaded pairs of marginal nodes (paragraph 0159 (capacities of the edges sum up to no more than the capacity of the switch)).

Consider **claim 30**, and **as applied to claim 29 above**, Ben-Ami clearly discloses and shows a method, further comprising repeating the steps of this claim 27 in order

one or more times (paragraph 0012 (increasing capacity of plurality of communication edges), paragraph 0374 (monitor for utilization beyond threshold)).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 20, and 22-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Ben-Ami (U.S. Patent Publication #20020027885),** in view of **Fodor et al. (U.S. Patent #6788646).**

Consider **claim 20**, and **as applied to claim 18 above**, Ben-Ami clearly disclose and show the method as described.

However, Ben-Ami does not specifically disclose the further overload situation is produced when in a further scenario of high traffic load, in which the limit values for the access controls are still adhered to, a further threshold value is exceeded on a further link for the further traffic transmitted over the further link.

In the same field of endeavor, Fodor et al. clearly show the further overload situation is produced when in a further scenario of high traffic load, in which the limit values for the access controls are still adhered to, a further threshold value is exceeded on a further link for the further traffic transmitted over the further link (fig. 2; column 11, lines 19-59 (iterative steps to tune the cut-off parameters to its maximum in order to minimize the blocking probabilities)).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of invention to demonstrate a method for setting limit value, as taught by Ben-Ami, and show overload situation is produced when in a further scenario of high traffic load, in which the limit values for the access controls are still adhered to, a further threshold value is exceeded on a further link for the further traffic transmitted over the further link, as taught by Fodor, so that capacity can be optimized.

Consider **claim 22**, and **as applied to claim 11 above**, Ben-Ami clearly disclose and show the method as described.

However, Ben-Ami does not specifically disclose making access checks for all the traffic of a class of service.

In the same field of endeavor, Fodor et al. clearly show making access checks for all the traffic of a class of service (column 5, lines 27-47 (provide the contracted QoS)).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of invention to demonstrate a method for setting limit value, as taught by Ben-Ami, and show making access checks for all the traffic of a class of service, as taught by Fodor, so that capacity can be optimized.

Consider **claim 23**, and **as applied to claim 22 above**, Ben-Ami clearly disclose and show the method as described.

However, Ben-Ami does not specifically disclose the access checks relate to an approval or rejection of individual flows.

In the same field of endeavor, Fodor et al. clearly show the access checks relate to an approval or rejection of individual flows (column 1, lines 58-65 (reject new calls to protect in-progress calls in order to provide QoS)).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of invention to demonstrate a method for setting limit value, as taught by Ben-Ami, and show the access checks relate to an approval or rejection of individual flows, as taught by Fodor, so that capacity can be optimized.

Response to Argument

Applicant's arguments filed on April 7, 2008, with respect to claims 11 and 18, on pages 2-4 of the remarks, have been carefully considered.

In the present application, Applicants basically argue, that Fodor's nodes include both marginal and internal nodes and do not correspond to Applicant's marginal nodes. The Examiner has modified the response with a new reference which provides edge

nodes which start and end transmission within a network. See the above rejections of claims 11 and 18, for the relevant interpretation and citations found in Ben-Ami, disclosing the missing limitations.

Conclusion

Any response to this Office Action should be **faxed to** (571) 273-8300 **or mailed to**:

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Hand-delivered responses should be brought to

Customer Service Window
Randolph Building
401 Dulany Street
Alexandria, VA 22314

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Sai-Ming Chan whose telephone number is (571) 270-1769. The Examiner can normally be reached on Monday-Thursday from 8:30am to 5:00pm.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Seema Rao can be reached on (571) 272-3174. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free) or 571-272-4100.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist/customer service whose telephone number is (571) 272-2600.

/Sai-Ming Chan/
Examiner, Art Unit 2416
December 13, 2008

/Brenda Pham/
Primary Examiner, Art Unit 2416